

Proposed Project

Upper Little Patuxent

Project Number: 1668

Subwatershed: Red Hill Branch

Project Type: Stream Restoration

Project Size: Approx. 100-150 linear feet

Project Location: Just west of Autumn Harvest Road in Ellicott City



Project Description: This project would include the regrading of the stream banks in order to lessen the existing steep bank slopes and prevent further erosion. Stone toe protection would be applied to the toe of the banks to further insure their stability. This project would also require riparian buffer enhancement plantings in disturbed areas to improve stream stability and restore ecological function.

Project Benefits:

Stabilization	The stream banks will be stabilized to reduce toe scour and erosion.
Water Quality	Implementation of this project will provide a reduction in sediment supply and the associated water quality benefits.
Education	The project could provide educational benefits due to the proximity of the project to adjacent residential areas.

Project Constraints:

Environmental	Stream/wetland permitting will necessary and stream closure periods may affect timing of work. No major environmental constraints are anticipated with this project.
Property Ownership	This property is owned by the Longate/Wheatfield natural resource open space area with the exception of a portion of the stream channel that has migrated onto a private residential property at 8534 Autumn Harvest Road.
Facility Access	Access to this site is obtained from Autumn Harvest Road.
Design / Construction	A sewer line runs parallel to the right bank (facing downstream). No major design or construction constraints are present.

Proposed Project

Upper Little Patuxent

Project Number: 1668

Subwatershed: Red Hill Branch

Project Type: Stream Restoration

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL
Stream Restoration				
Stream restoration/stabilization ¹	100	LF	\$585.00	\$58,500
Buffer enhancement		LF	\$30.00	\$0
Outfall stabilization/protection		LF	\$100.00	\$0
Direct Construction Subtotal				\$58,500
Indirect Costs				
E/SC, MOT, MOS (included above)				\$0
Construction Stakeout (2%)	1	LS	\$1,170.00	\$1,170
Base Construction Cost				\$59,670
Mobilization (10% of Directs or \$1,000)				\$5,850
Subtotal				\$65,520
Contingency (30%)				\$19,656
Construction Subtotal				\$85,176
Env't'l Studies / Permitting (5% of Construction or \$5,000)				\$5,000
Engineering and Surveys				\$74,000
Post-Construction Monitoring (\$40 / LF or \$4,000)				\$4,000
Total Capital Cost				\$168,176
Operations and Maintenance Costs				
Annual Maintenance	5	Percent	\$2,925	
Discount Rate	5	Percent		
Expected Life	5	Years		
Net Present Value of Annual Costs				\$12,664
Life Cycle Cost				\$180,900

¹Cost per linear foot is based on linear regression of previous stream restoration/stabilization jobs ranging from 35 to 2215 linear feet.